

COMPOSITIONS AND METHODS UTILIZING STABLE REPORTER CELL LINES FOR
DETECTION OF PATHWAY-SPECIFIC SIGNAL TRANSDUCTION

ABSTRACT OF THE DISCLOSURE

The invention encompasses compositions and methods which utilize a cell line comprising a stably integrated recombinant nucleic acid construct comprising a reporter gene operably linked to a recognition sequence for a sequence-specific DNA-binding protein and a stably integrated recombinant nucleic acid construct comprising a sequence encoding a fusion protein, the fusion protein comprising a sequence-specific DNA binding domain, wherein the DNA binding domain specifically binds the recognition sequence, and a conditionally active transactivation domain, wherein activation of the conditionally active transactivation domain is dependent on protein phosphorylation and/or protein:protein interaction, and wherein binding of the fusion protein to the recognition sequence results in transactivation of the reporter gene expression when the transactivation domain fused to the DNA binding domain is activated.

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